

University of Sopron
István Széchenyi Economics and Management Doctoral School

**Business use of social media in Hungary:
Opportunities across generations, regions and platforms in the catering
industry**

Theses of the Doctoral Theses

Bendegúz Richárd Nyikos

Sopron

2022

Doctoral School: István Széchenyi Economics and Management Doctoral School

Head of the Doctoral School: Prof. Dr. Csilla Obádovics PhD

Programme: Marketing Programme

Supervisor: Dr. Katalin Mészáros PhD

Dr. habil. Zoltán Szabó PhD MBA

Signature(s) of the supervisor(s)

1. Introduction and aim of the research

Service has always been an industry that was considered as a special one, unlike others. The characteristics can highly vary and along with the definition, they constantly change and evolve. Hospitality and catering have undergone serious transformation over the course of the latest years, especially due to the COVID-19 pandemic. Inevitably, consumers also had to adapt to these alterations.

Consumer behavioural patterns have always highly depended on the age cohort of the person who is being analysed. Even though habits can be different on a personal level, according to various researches it has been proven that individuals can be categorised: generalisation based on generations is a commonly used method.

We are living in the rapidly changing era of the 21st century – it is almost impossible to follow the technological development in the various sectors. Societies worldwide became digital and mobile: the starting point of this new era could be traced back to the mid-1990's, when the usage of Internet has started to grow rapidly - mostly in the Western civilization - and spread in the developing world. Along with the technological evolution, the marketing practices have also gone through changes, social media marketing can be viewed as one of the latest developments in the field.

Traditional marketing can be very expensive – for a small business owner it is sometimes impossible to reach their targets through these channels due to the limited resources. Social media marketing, on the other hand, is more cost effective and gives more opportunities to reach both current and possible, prospective customers. The different generations have different needs and preferences – also in terms of their Internet consumption and social media usage. Although the gap between Generation Y and Z is not as wide as between other groups, however there are significant differences to be considered in order to reach them through online marketing and mainly with the implementation of social media strategies.

There are already researches available on the different generations in Hungary that focus on discovering their behavioural patterns. However, there are no recent studies that incorporate their social media consumption habits and the practices of local establishment in the catering service industries. Additionally, the COVID-19 pandemic forces both the companies and the costumers to adapt – which also resulted in quite a few changes in the marketing practices and the behavioural habits of the consumers.

Even though the importance of social media marketing has been already recognised by various companies in Hungary, in order to leverage the full potential of the different platforms it is required to be familiar with the capabilities of these applications.

In addition to discovering the possibilities of each of the commonly used to social media platforms it is also essential to understand the consumption habits of the different generations which could help businesses to find the most effective way to address them with the contents.

The COVID-19 pandemic has brought significant changes for businesses worldwide that also influenced the practices of local establishments in Hungary. Therefore, uncovering the feelings of generation Y and Z towards social media practices have become even more important.

The research makes it also possible to compare the present and the pre-COVID state in order to draw conclusions on whether the attitude of the two generations have been altered during the period. In case of observing a noticeable change, the degree could be measured and upon experiencing a significant evolution, it should also be taken into consideration when it comes to establishing marketing campaigns.

In conclusion, besides presenting the relevant theoretical frameworks of the research, the dissertation also has a practical relevance and the possible new scientific results could support businesses in the pursuit of a higher success with their social media strategies.

A wide range of researches are readily available on the consumption behaviour of generation Y and Z in terms of social media usage on both an international and on a national basis. However, their patterns in connection with the various social media practices used by catering establishments have not been investigated recently. In addition, observing the habits through qualitative and quantitative researches on local scales in Hungary and comparing pre-COVID data with the present state allows the dissertation to present results not yet been discovered.

In order to have a deeper understanding on the feeling of the different generations about specific types of content, it is essential to discover how they value the most commonly used practices in general. In addition, based on the analysis of the relevant literature, primary researches will be used to have a deeper understanding of the behavioural patterns of the two generations.

Social media in general serves as a perfect platform to employ different influencers. Ranging from well-known international celebrities to local, micro-influencers, anybody could possibly influence the purchase decisions of individuals. The research also aims to discover how generation Y and generation Z feel about the appearance of such ambassadors and opinion leaders.

The pandemic had an enormous effect on many of the different industries and sectors. Along with the changes in the practices, consumers were also influenced to alter their behavioural patterns. Due to the lack of data available on consumption habits of generation Y and generation Z, after the review of the relevant secondary sources, primary researches aim to compare the present and the pre-COVID states.

2. Methodology

The literature review of the dissertation is divided into five chapters. The secondary research was followed by primary research, which included both qualitative (interviews and focus group discussion) and quantitative (questionnaire) methods.

The interviews were solely concluded in Sopron. In order to have a deeper understanding of the behaviours and habits of the interviewees, an initial, line-by-line coding technique was used. Later on, these codes were classified and the categories were established for focused coding.

The objective of the focus group discussion was to find out what the participants think about celebrities and the effect of their endorsement. The goal was to collect information and to use it to draw conclusions regarding the effectiveness of celebrity endorsement.

The reactions and opinions had been examined in order to answer the research question. The focus group discussion was focusing on the credibility of the celebrity, viewed from the three dimensions: physical attractiveness, trustworthiness and expertise, and the effect of celebrity endorsement on consumer behaviour.

In addition to the qualitative researches, a quantitative research method was also used in the form of questionnaires. As the first step, the target region of the quantitative research had been defined. Due to the fact that the research mainly focuses on the connection between consumer behaviour and the food and beverage industry, the initial idea was to approach guests at local establishments in Sopron and Győr and ask them to participate in the survey. Unfortunately, the field work was interrupted by the coronavirus and all establishments fell under the regulations of the government. Due to unexpected events, the research had to be revised in order to gather relevant data about the current situation.

Firstly, self-selection sampling was used: individuals were allowed to identify their desire to take part. Individuals from appropriate Internet, secondary school and university communities in Sopron and Győr were asked to participate and answer the question within the questionnaire. Secondly, convenience sampling was used as a non-probability sampling technique. Subjects were selected because of their convenient accessibility and proximity to the researcher. It involves the haphazard selection of the cases that are easy to obtain for the sample – interviewing a random person in a public place such as a railway station, a shopping mall or at a square.

In addition to a new questionnaire, a wider audience was selected to take part in the research after the governmental restriction were lifted, meaning that the inhabitants of Sopron and Győr were completed by participants from all over Hungary. Due to the fact that social media groups allow a convenient (but unfortunately not representative) way to reach individual all over the country, there is also data available from parts of Hungary other than Sopron or Győr. The collected answers were classified based on the location of the respondents into categories of the Hungarian counties. The collected answers were classified based on the location of the respondents. After cleaning the data gathered from the quantitative research and deleting the incomplete records, a total number of 2572 answers remained for the analysis.

Given the limitations, unfortunately no representative research could be concluded. The uncovered feelings and opinion throughout the conclusion of the interviews and the focus group discussion were used along with various questions regarding consumption habits both before and after the pandemic in order to understand how consumer preferences and the patterns might have altered since the outbreak of the COVID-19.

3. Summary of findings

The primary researches proved to be excellent additions to the examination of the relevant literature and other secondary sources.

Even though the different generations have different characteristics, most of them use some kind of social media. However, the members of generation Y and Z prefer different platforms: while Millennials are more likely to use Facebook in everyday life and Instagram for the purpose of sharing pictures, the majority of Generation Z uses different platforms, separately, for specific purposes.

There are considerably significant differences in the social media usage between the two generations. In general, Generation Z uses more platform. Even though that Facebook is the most popular one when it comes to following certain people, companies or establishments, according to the younger interviewees, in comparison to foreign businesses, local establishments have weaker presences on social media, meaning that there are only a small number of them to be found on Instagram or Snapchat, none of them has a TikTok account during the time span of the research.

Cognitive dissonance can occur on a very regular basis when consumers experience guilt, regret or possibly anxiety. They feel incomplete and when they evaluate the available alternatives identified in the decision making process, they might give higher priority to such products. When cognitive dissonance reaches a certain level, customers want to decrease this feeling and confliction: consumers believe that purchasing a certain product can help them, make them feel better and increase their self-confidence. However, the advertisements do not necessarily have to be aimed at the people who use the product: it is more important to influence the purchasers of the products and create incompleteness.

The focus group discussion suggests that both generations have a certain degree of trust in influencers and opinion leaders who they are feeling more familiar with and given the fact that influencers appear to more ordinary in comparison to international and national celebrities, they have a higher success rate when it comes to altering consumer perceptions with their reviews and recommendations.

Along with celebrities and brand ambassadors, the effects of influencers were also aimed to be discovered. In case of making a purchase decision solely based on the recommendation of such a person, there is a statistical difference between the two generations.

The idea of endorsement and brand ambassadors can be highly variable: individuals might have different ideas of people whose opinion they would trust. Along with traditional celebrities, the role of influencers and opinion leaders on social media has proven to be extremely prominent when it comes to influencing consumers.

According to age, the two generations are close to each other, however, their habits are significantly different: while generation Y seems to stick to the already known practices and use Facebook the most often, Generation Z is simply more open to new alternatives and looking for Facebook substitutes. Moreover, the fact that younger people are more familiar with the alternatives also supports the theory that they find trends more significant.

The pandemic had an enormous effect on many of the different industries and sectors. Hospitality, catering and the food and beverage establishments and businesses felt the negative effect to a higher extent: due to governmental regulations they either changed their practices or took extreme measure and were forced to close entirely. Along with the changes in the practices, consumers were also influenced to alter their behavioural patterns.

When all the establishments were forced to shut down, some of them were still able to offer food and drink items with take-away or delivery options. Businesses used different methods to make sure that people are aware of these options and are still able to purchase their offerings.

Advertisements on social media proved to be the most reliable source for both generations. For generation Y, in all three cases seeing the new options of consumption whilst walking past an establishment was the second most commonly chosen answer, while this option was selected quite rarely in case of generation Z. Participants also had the option to choose “personally searched information about it on social media”: a larger group of generation Z looked for information on the topic on social media, while in case of generation Y, a considerably smaller group selected this answer. Friends and family members are considered as one of the primary sources of information for both generations. In case of the option which relates to the automatic assumption based on the governmental restriction, a significant number of generation Z participant picked it. It also must be noted that this option was the least frequently chosen answer in case of generation Y. Print media is considered as a relatively unpopular source of information for both generations.

Besides measuring the relative importance of social media in case of receiving information on recent topics such as changes in business practices, the research also aimed to discover which platforms should be used in order to reach out and getting in touch with the different generations.

4. Results and scientific contribution

Through the analysis of the foreign and local practices of cafés and bistros it has been seen that even though there are successful strategies and means of social media marketing, it is difficult to address multiple generations with the same content.

Even though the older generation is less open for using new platforms in general, both the literature review and the primary research pointed out the high significance of establishing multi-platform social media campaigns.

Facebook is the network that allows companies to reach masses and most importantly, the majority of generation Y, who require clean news feed and informative contents. Even though Generation Z is present on Facebook and shows more interaction than Millennials, they require a multi-platform strategy to be pleased. The majority of younger people prefer Instagram, Snapchat and TikTok over Facebook. These platforms would allow companies to reach the younger audience more successfully. Since these networks are mainly used by Generation Z, the establishments of marketing campaigns on these platforms are less complicated than in the case of Facebook.

Based on the findings of the study, along with Facebook and Instagram accounts the establishment of a Snapchat and TikTok account is highly recommended: it allows any companies to reach more customers, mainly younger generations and to complement the social media strategies with new, creative and unconventional practices that could result in even higher success.

The analysis of the relevant literatures and the findings of the primary research lead to the following theses:

T1: The different generations value the importance of the three dimensions of a credibility in case of celebrity endorsement differently

It is clearly seen that in some special cases the strong relationship established between endorser and product can have a stronger effect on consumers: the professional or the endorser who has expertise is more likely to influence the consumers.

However, in general cases, there is no need for the “fit”: the three dimensions of the celebrities (attractiveness, trustworthiness and expertise) are more important: the companies must choose the right celebrity with the right attributes to influence the consumers. According to the results of the questionnaire, it can be stated that there are slight differences in the valuation of the three credibility dimensions by the two generations. However, the difference is considerably more prominent in the case of the attractiveness dimensions.

T2: Out of the three dimensions, expertise is considered as the most influential by both generations

According to the accumulated responses of the answers gathered in Sopron, in Győr and on a nationwide scale, the results of the questionnaire suggest that expertise is the most important dimension for both generations: more than 90 % of the participants of generation Y and generation Z from all four questionnaires chose either the “really important” or the “rather important” options.

T3: Celebrities do not necessary have to fit the brand or product they endorse in case the consumer experiencing cognitive dissonance

It is clearly seen that celebrities have a compelling power and are able to easily influence the consumers even if they do not “fit” a certain product and/or brand. Due to the fact that no one has full control over the information that reaches him or her, the dissonance, inconsistency can easily occur. As well as establishing a great relationship, a “fit” between endorser and product is an excellent way to influence the decision making process of the customers: it is possible to succeed with an advertisement presented by a celebrity who has absolutely nothing in common with the good he or she endorses.

Celebrities can easily create cognitive dissonance even if the celebrity does not “fit” the brand or product: being attractive, trustworthy or having expertise is more highly valued in such cases. The results from both the questionnaire and the focus group discussion show that a celebrity who matches either one or more dimensions can have a stronger effect on the purchasing decision, especially when a unique concept or situation is created. In the case of fashion, clothing or perfumes attractiveness is highly influential. The role of cognitive dissonance is important in such cases: the customer compares his or her current self-image with the image of the endorser, begins to feel uncomfortable, imperfect and incomplete – this is when dissonance rises. In order to reduce this dissonance and to become similar to the character in the advertisement he/she purchases and uses the product which makes him/her feel better.

T4: Generation Y is more likely to purchase at a specific establishment based on the recommendation of an influencer, especially with higher expertise in the subject.

Based on the results of the primary research it can be stated that the majority (63,03 %) of generation Y is not interested in the recommendation of the different influencers. However, in the case of generation Z, it can be concluded that they are more likely to make purchase decision based on the recommendation of an influencer – only 8,99 % of all the participants said that they are not interested in the recommendations. However, it must also be noted that expertise proved to be more important than the recommendation of a person who they either like or follow.

T5: Both generations are equally interested in seeing exclusive offers and sweepstakes on social media, however, generation Y is more likely to follow an establishment on social media only for the purpose of receiving exclusive offers and participating in sweepstakes

When it comes to the effects of sweepstakes and other exclusive offers on social media, both generations are similarly interested in seeing them on the various platforms and they value these contents considerably highly.

However, when it comes to following a catering establishment on a social media platform just to come across such sweepstakes and exclusive discounts and offers, the answers gathered from the two generations are greatly different.

Even though in all four cases the answer “definitely not” was proved to be the least popular, there are notable differences between the two generation.

More than the two-third of generation Z chose “without any conditions” in all three locations. In addition, after accumulating all the answers from all three, 67,5% of the participants of generation Z would gladly follow any catering establishments only for the purpose of receiving exclusive offers or to participate in sweepstakes.

T6: Social media was the most important source of information for both generations when establishments offered take-away and delivery options after shutting down during the COVID-19 pandemic, however the two generations can be reached by the establishments through different channels

Advertisements on social media proved to be the most reliable source for both generations either by coming across with a social media advertisement or by personally searching information about the changes based on the restrictions on social media.

However, the channel itself they used for receiving information about these changes were quite different. Even though the different alternatives to Facebook are becoming popular for generation Y, the largest platform still remains the most prevailing source of information for them. However, in the case of generation Y, Instagram has become the commonly used platform in pursuit of information.

T7: The model of “*Influencing factors of providers and receivers of service and their impact on the service process of hospitality*” was created.

The careful examination of the various scientific sources and additional literature, with the additional finding of the primary research allowed the researcher to create a model representing a wide range of factors that influence the service provider and the customer receiving the service, with an additional focus on the presentation of the impacts on the basic service process of hospitality. The arrows in Figure (1) represent the relationship between the elements and shows where the two parties of the service – the provider and the receiver – are connected to each other.

In the middle of the model is the hospitality service process and the three consecutive steps: condition of creation, process of fulfilment and customer experience. Based on the secondary research it can be stated that the first step solely connects to the service provider, while the way how the customer experiences and rates the service at the end only depends on them. However, the model also emphasises that the step of process of fulfilment allows both sides to take part together.

On the side of the provider of the service, the main three groups of elements can be found. The service itself highly depends on the nature and type of the establishment, as commercial catering units have different capabilities and also overall goals than workplace businesses. Besides the category of the given establishment, it must also be taken into account that businesses can have a wide range of available capital and assets, as well as physical and human resources, both in the frontline and in the backline of the operations. Lastly, the social media marketing was listed as influencing factors on the side of the service provider. It is essential to understand how its elements and activities must be carefully coordinated, in which UGC (user generated content) plays a significant role. When it comes to the various activities, even though they are planned and implemented by the business itself, some of them highly depend on the involvement of the customers, namely the engaging and the interaction activities. Along with the customer, the influencers represent valuable assets to the businesses, as they are able to effectively affect the purchase decisions of the current and potential customers.

When it comes to influencer or, in fact, brand ambassadors or celebrity endorsers, having a strong connection established between the representing person and the brand or product is considered vital by customers. However, the credibility dimensions must also be mentioned.

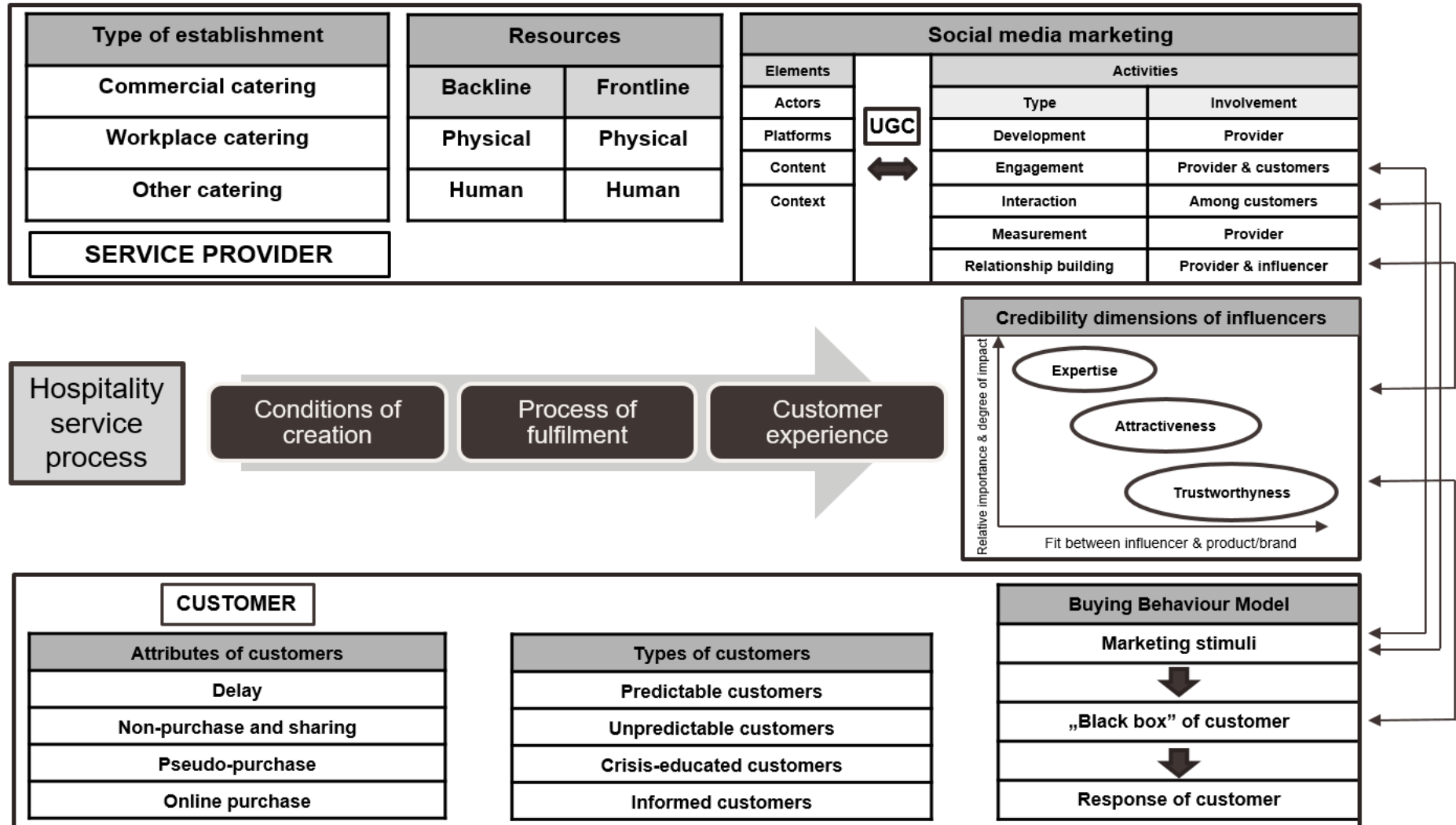
The secondary research served as a solid base and the finding of the primary research led to the conclusion that even though all three elements (attractiveness, trustworthiness, expertise) are considered important in case of the credibility of anyone representing or promoting a given company, however, a person with a higher expertise and experience with a product category are viewed the most credible by the researched generations – especially when there is only a small or no “fit” between the person and the brand or product.

The social media marketing activities and the credibility dimensions of opinion leaders served as the second point of connection between provider and customer. The networking platforms made it possible for the two sides to interact basically anytime they wish. The activities of

establishments and the chosen influencers, ambassadors and endorsers can have a significant effect on the individual buying behaviour of the customers, the steps of the buying behaviour model can be easily altered. Along with the model of purchasing behaviour, there are two more additional groups of elements on the side of the customer: the type and attributes of the individual. The two groups have similar properties and effects on the valuation and the decision-making of the customer, however, while the type of the individual considers the nature of the people and mainly depends on the generation which they belong to, the attributes focuses on the individual behavioural patterns and the subjective methods and ways the customers choose when it comes to making a purchase.

Even though there might be other groups of elements that could be considered as influential as the presented dimensions, the author believes that this general model could have both a scientific outcome: it summarises the established models of various researchers from a wide range of fields, and also a practical relevance, since it could serve as a guideline for businesses when it comes to the planning of their operations and of course, their social media marketing activities.

Figure (1): Influencing factors of providers and receivers of service and their impact on the service process of hospitality



Source: Own research and editing

5. Conclusion, suggestions

Based on the analysis of the relevant literature and the findings of the primary researches, brand ambassadors and celebrities can influence the consumer decisions either if having a strong connection or fit with the advertised brand or product or create cognitive dissonance for the individuals when seeing them in the advertisements. Additionally, ambassadors should identify with at least one of the three dimensions of credibility in order to successfully influence the decision-making. It also suggests that both generations have a certain degree of trust in influencers and opinion leaders who they are feeling more familiar with and given the fact that influencers appear to more ordinary in comparison to international and national celebrities, they have a higher success rate when it comes to altering consumer perceptions with their reviews and recommendations. Through the analysis of the foreign and local practices of various catering establishments it has been seen that even though there are successful strategies and means of social media marketing, it is difficult to address multiple generations with the same content.

The findings were once again reaffirmed by the results of the questionnaire: it can be concluded that having a multi-platform presence on social media is necessary also for food and beverage establishments. Younger generations are not only open for new alternatives but also more likely to switch from the traditional channels such as Facebook to new, trendy alternatives. Therefore, it would be advantageous also for Hungarian companies and create account also on other platforms than Facebook: the current practice of 2021-2022 shows that even though there are some outstanding examples from catering companies, the vast majority and the average establishments seem to understand how important it can be to be part of other communities.

Ultimately, the dissertation introduces a “value-added” component for generally any type of business in the Hungarian SME sector: based on the findings, the practices of various establishments and companies could be tailored to suit the expectations of the different generations in order to increase the effectiveness of their social media campaigns.

6. Publications

Scientific works published in foreign language in chronological order:

1. Nyikos, B. R. (2019). The Popularity of Facebook in Hungary: Why is it Important When it Comes to Brand Building? In *MODERN GAZDASÁG, OKOS FEJLŐDÉS Nemzetközi Tudományos Konferencia. Sopron, 2019. november 7. – Konferenciakötet / MODERN ECONOMY, SMART DEVELOPMENT International Scientific Conference. Sopron, 7 November 2019. – Publications* (pp. 393–401).
2. Nyikos, B. R. (2020). Celebrity Endorsement and Cognitive Dissonance: Do Ambassadors Have to Fit the Brand? In *VÁLSÁG ÉS KILÁBALÁS: INNOVATÍV MEGOLDÁSOK Nemzetközi Tudományos Konferencia Sopron, 2020. november 5. – Konferenciakötet / CRISIS AND RECOVERY: INNOVATIVE SOLUTIONS International Scientific Conference 5 November 2020, Sopron – Conference Proceedings* (pp. 280–288).
3. Nyikos, B. R. (2020). Digitalisation in Europe: How did Hungary perform on a European scale in the most recent years? In *Flows of Resources in the Regional Economy in the Age of Digitalisation* (pp. 659–671).
4. Nyikos, B. (2021). Satisfying customers during the pandemic: Are restaurants required to offer delivery service? IN *PANDÉMIA – FENNTARTHATÓ GAZDÁLKODÁS – KÖRNYEZETTUDATOSSÁG : Nemzetközi tudományos konferencia a Magyar Tudomány Ünnepe alkalmából* (p. 50).
5. Nyikos, B. R. (2022). Consumer Behaviour of Generation Y and Z during the Pandemic: Attitude Change towards Restaurants and Delivery. *GAZDASÁG ÉS TÁRSADALOM*, 14 (2021)(1), 5–25. <http://doi.org/10.21637/GT.2021.1.01>
6. Nyikos, B. R. (2022). Digital Marketing: A Practical Approach. *GAZDASÁG ÉS TÁRSADALOM*, 13 (2020)(3–4), 129–138. <http://doi.org/10.21637/GT.2020.3-4.08>
7. Nyikos, B. R. (2022). Do Ambassadors Need a Relationship with the Brand or Product? The Study based on the Opinion of a Focus Group. *GAZDASÁG ÉS TÁRSADALOM*, 13 (2020)(3–4), 38–58. <http://doi.org/10.21637/GT.2020.3-4.03>
8. Nyikos, B. R., & Pankotay, F. M. (2022). The Psychological Effects of Celebrity Endorsement on the Consumer Purchasing Behavior. In *37th IBIMA Conference on 30-31 May 2021, Cordoba, Spain. Conference proceedings*.
9. Nyikos, B. R. (2022). Lean thinking in social media marketing: possibilities on a local scale in the catering industry. In *TÁRSADALOM – GAZDASÁG – TERMÉSZET: SZINERGIÁK A FENNTARTHATÓ FEJLŐDÉSBEN (Nemzetközi tudományos konferencia a Magyar Tudomány Ünnepe alkalmából) - Programfüzet és előadáskivonatok* (p. 100).

10. Nyikos, B. R. - Ionescu, A. (2022). Application Areas Of Drones: Exploratory Research From Residential And Corporate Perspectives. In *TÁRSADALOM – GAZDASÁG – TERMÉSZET: SZINERGIÁK A FENNTARTHATÓ FEJLŐDÉSSEN (Nemzetközi tudományos konferencia a Magyar Tudomány Ünnepe alkalmából) - Programfüzet és előadáskivonatok* (p. 101).
11. Nyikos, B. R. – Mészáros, K. (2022). How do Generation Y and Z Relate to the Practices of Companies Towards Sustainability? Focusing on Cafés and Catering Units Specializing in Non-Alcoholic Drinks in Sopron and Győr. In: Széles, Zsuzsanna; Resperger, Richárd; Szőke, Tünde Mónika (szerk.) *A kriptovaluták szerepe a fenntartható gazdaságban : XVI. SOPRONI PÉNZÜGYI NAPOK* pénzügyi, adózási és számviteli szakmai és tudományos konferencia Sopron, 2022. szeptember 28–30. Sopron, Magyarország : Soproni Egyetem Kiadó (2022) 518 p. pp. 296-310., 15 p.
12. Nyikos, B. R. (2022). Public opinion and influencers on social media: the valuation of their effects by generation Y and Z in Hungary Public opinion and influencers on social media. *GAZDASÁG ÉS TÁRSADALOM*, 14 (2021) 3-4, pp. 63-81 (2022) DOI: 10.21637/GT.2021.1.01

Scientific works published in Hungarian language in chronological order:

1. Nyikos, B. R. (2018). A közösségi média növekvő szerepe Magyarország és Ausztria összehasonlításában. In *DEMOGRÁFIAI VÁLTOZÁSOK, VÁLTOZÓ GAZDASÁGI KIHÍVÁSOK Nemzetközi Tudományos Konferencia. Sopron, 2018. november 8. – Tanulmánykötet. / DEMOGRAPHIC CHANGES, CHANGING ECONOMIC CHALLENGES International Scientific Conference. Sopron, 8 November 2018. – Publications.* (pp. 394–402).
2. Sipos, Gy., Kredics, L., Chen, I., Sahu, N., Prasanna, A., Champramary, S., Kedves, O., Indic, B., Raj, G., Nyikos, B.R., Huyn, T., Kocsubé, S., Vörös, M., Marik, T., Nagy, V.D., Szekeres, A., Münsterkötter, M., Bencsik-Bóka, B., Szűcs, A., Tyagi, Ch., Merényi, Zs., Vágvolgyi, Cs., Nagy, L. (2021) *Az erdészeti kártevő Armillaria (tuskógomba) nemzetség patológiája és a biológiai védekezés lehetőségei.* Sopron: Soproni Egyetemi Kiadó. ISBN: 9789633344156 ISBN: 9789633344163
3. Mészáros, K., & Nyikos, B. R. (2022). NEUROMARKETING ELMÉLETI ÁTTEKINTÉSE- Theoretical Overview of Neuromarketing. In *TÁRSADALOM – GAZDASÁG – TERMÉSZET: SZINERGIÁK A FENNTARTHATÓ FEJLŐDÉSSEN (Nemzetközi tudományos konferencia a Magyar Tudomány Ünnepe alkalmából) - Programfüzet és előadáskivonatok* (p. 67).